Hydraulic and Hydrologic Considerations in Planning

Objective

Class will provide:

- **Brief overview of planning to set the stage**
- **Context for why H&H is important for planners**
- **Course strategy**

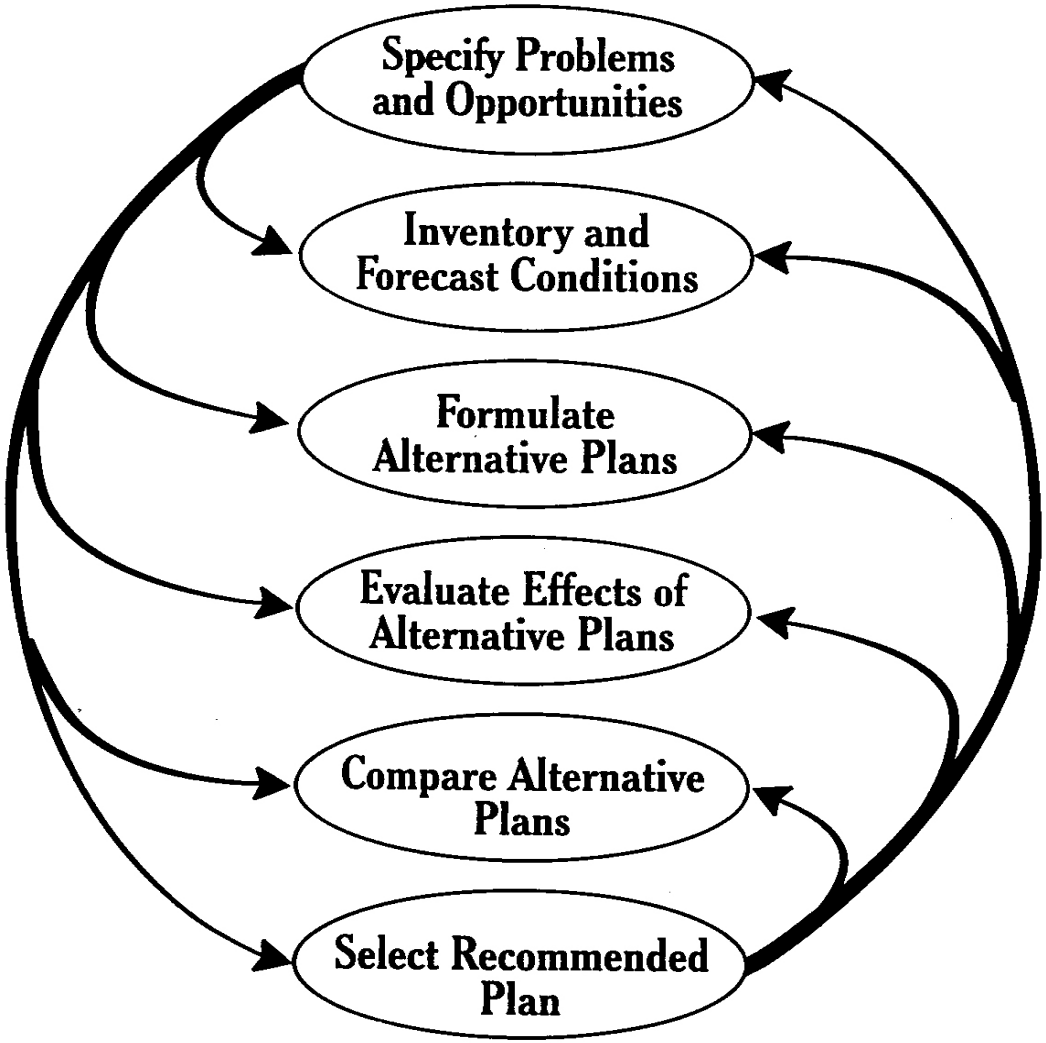
What Three Things are Necessary before You Begin a Planning Study?

- Local Sponsor
- Authorization
- Appropriation

What Do You Do As A Planner?

- Formulate solutions to water resources problems
- Develop decision documents

PLANNING PROCESS



Types of Decision Documents

- Section 905(b) Analysis
- Feasibility Report
- Limited Reevaluation Report
- General Reevaluation Report
- Continuing Authorities Report
  - Federal Interest Determination
  - Detailed Project Report
  - Planning and Design Analysis

USACE Civil Works Mission Areas

- **Storm/Flood Risk Management**
  - **Coastal areas**
  - **Riverine flooding**
- **Navigation**
  - **Inland**
  - **Deep Draft**
- **Aquatic Ecosystem Restoration**

Why Do Planners Need to Understand Hydrology and Hydraulics?

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Because everything we do involves water

- Reducing risk of flooding
- Improving navigable channels or harbors
- Restoring the function and structure of aquatic ecosystems

Planning Phases

- Reconnaissance phase
- Feasibility phase

H&H Engineer's Role

- **Reconnaissance Study**
  - ✓ **Knowledge of existing H&H information/conditions**
  - ✓ **Professional judgment of potential solutions**
  - ✓ **Input into scope, schedule and cost of Project Management Plan**
- **Feasibility Study**
  - ✓ **Develop hydrologic and hydraulic information and data**
  - ✓ **Perform hydrologic and hydraulic analysis**
  - ✓ **Support plan formulation efforts**
  - ✓ **Support communication with sponsor, stakeholders, and public**
  - ✓ **Help create decision documents**

Course Strategy

Course Strategy

- **Academics**
  - **Differentiate between hydrology and hydraulics**
  - **Cover basic concepts of each**
  - **Enable you to “talk the language”**
- **Application**
  - **Coastal Risk Management**
  - **Flood Risk Management**
  - **Navigation**
  - **Ecosystem Restoration**
  - **Developing Scope, Schedule, and Costs**
- **Field Trip/Exercises to reinforce learning**

Class Interaction

- Encourage class participation
- Welcome questions on your studies
- Opportunities for hands-on
  - Field Trip
  - Class Exercises

Class Goal: Be able to more effectively interact with H&H engineers on your PDTs

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Questions?